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\*\*\* YOU HAVE NEW MAIL \*\*\*

=> s oligonucleotide (7a) support

L1 7324 OLIGONUCLEOTIDE (7A) SUPPORT

=> s l1 and protect? (3a) group (7a) terminal hydroxy?

L2 23 L1 AND PROTECT? (3A) GROUP (7A) TERMINAL HYDROXY?

=> s l2 and label? (10a) protect? (4a) group

L3 1 L2 AND LABEL? (10A) PROTECT? (4A) GROUP

=> d l3 bib abs

L3 ANSWER 1 OF 1 USPATFULL on STN

AN 2006:144862 USPATFULL

TI Method of manufacturing labelled oligonucleotide conjugates

IN Stengele, Klaus Peter, Pleiskirchen, GERMANY, FEDERAL REPUBLIC OF

Kvassiouk, Evgueni, Waldkraiburg, GERMANY, FEDERAL REPUBLIC OF

PI US 20060122382 A1 20060608

AI US 2003-531292 A1 20031014 (10)

WO 2003-EP11354 20031014

20051121 PCT 371 date

20021014

FRAI DE 2002-10247790

DT Utility

FS APPLICATION

LREP MILLEN, WHITE, ZELANO & BRANIGAN, P.C., 2200 CLARENDON BLVD., SUITE

1400, ARLINGTON, VA, 22201, US

CLMN Number of Claims: 8

ECL Exemplary Claim: 1

DRWN 1 Drawing Page(s)

LN.CNT 487

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to a method for the manufacture of labeled oligonucleotide conjugates comprising the reaction of (a) an oligonucleotide having a labile protecting group bound to a terminal hydroxy group, and (b)

a labeling compound, wherein said labile protecting group is partially or completely substituted by said labeling compound in a nucleophilic substitution reaction.  
##STR1##

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> s l2 not l3  
L4 22 L2 NOT L3

=> dup rem l4  
PROCESSING COMPLETED FOR L4  
L5 22 DUP REM L4 (0 DUPLICATES REMOVED)

=> s l5 and label?  
L6 16 L5 AND LABEL?

=> s l6 and orthogonal  
L7 0 L6 AND ORTHOGONAL

=> s l6 and label? (5a) oligonucleotide?  
L8 15 L6 AND LABEL? (5A) OLIGONUCLEOTIDE?

=> d l8 bib abs 1-15

L8 ANSWER 1 OF 15 USPATFULL on STN  
AN 2009:5312 USPATFULL  
TI Nucleic acid derivatives  
IN Segev, David, Mazkeret Batia, ISRAEL  
PA Bio-Rad Laboratories Inc., Hercules, CA, UNITED STATES (non-U.S. corporation)  
PI US 20090005334 A1 20090101  
AI US 2008-1275 A1 20080219 (12)  
RLI Continuation of Ser. No. US 2006-365928, filed on 2 Mar 2006, Pat. No. US 7348148 Division of Ser. No. US 2002-57928, filed on 29 Jan 2002, Pat. No. US 7034131  
PRAI US 2001-264308P 20010129 (60)  
DT Utility  
FS APPLICATION  
LREP MARTIN D. MOYNIHAN d/b/a PRISI, INC., P.O. BOX 16446, ARLINGTON, VA, 22215, US  
CLMN Number of Claims: 55  
ECL Exemplary Claim: 1-20  
DRWN 33 Drawing Page(s)  
LN.CNT 2821

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A compound which comprises a backbone having a plurality of chiral carbon atoms, the backbone bearing a plurality of ligands each being individually bound to a chiral carbon atom of the plurality of chiral carbon atoms, the ligands including one or more pair(s) of adjacent ligands each containing a moiety selected from the group consisting of a naturally occurring nucleobase and a nucleobase binding group, wherein moieties of the one or more pair(s) are directly linked to one another via a linker chain; building blocks for synthesizing the compound; and uses of the compound, particularly in antisense therapy.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 2 OF 15 USPATFULL on STN  
AN 2007:210646 USPATFULL

TI Fret process  
IN Sagner, Gregor, Penzberg, GERMANY, FEDERAL REPUBLIC OF  
Heindl, Dieter, Paehl, GERMANY, FEDERAL REPUBLIC OF  
Bechler, Ingrid, Geretsried, GERMANY, FEDERAL REPUBLIC OF  
Krause, Christina, Penzberg, GERMANY, FEDERAL REPUBLIC OF  
PA ROCHE MOLECULAR SYSTEMS, INC, Alameda, CA, UNITED STATES, 94501 (U.S.  
corporation)  
PI US 20070184453 A1 20070809  
AI US 2003-678440 A1 20031001 (10)  
PRAI EP 2002-22228 20021002  
DT Utility  
FS APPLICATION  
LREP ROCHE MOLECULAR SYSTEMS INC, PATENT LAW DEPARTMENT, 1145 ATLANTIC  
AVENUE, ALAMEDA, CA, 94501, US  
CLMN Number of Claims: 12  
ECL Exemplary Claim: 1  
DRWN 4 Drawing Page(s)  
LN.CNT 1116

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention is directed to hybridization probes hybridizing  
adjacently to another at a target nucleic acid sequence, wherein one  
member of said hybridization probes comprises (i) a nucleotide sequence  
entity which is substantially complementary to the sequence of the  
target nucleic acid, (ii) a fluorescent entity being either a FRET donor  
entity or a FRET acceptor entity, and (iii) a spacer entity connecting  
the nucleotide sequence entity and the fluorescent entity.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 3 OF 15 USPATFULL on STN  
AN 2007:7542 USPATFULL  
TI Oligonucleotides having site specific chiral phosphorothioate  
internucleoside linkages  
IN Cook, Phillip Dan, Fallbrook, CA, UNITED STATES  
Manoharan, Muthiah, Weston, MA, UNITED STATES  
PA ISIS Pharmaceuticals Inc., Carlsbad, CA, UNITED STATES (U.S.  
corporation)  
PI US 39464 E1 20070109  
US 6440943 20020827 (Original)  
AI US 2004-925348 20040824 (10)  
US 1999-352058 19990714 (Original)  
RLI Continuation-in-part of Ser. No. US 1998-115027, filed on 14 Jul 1998,  
Pat. No. US 6242589  
DT Reissue  
FS GRANTED  
EXNAM Primary Examiner: Wilson, James O.; Assistant Examiner: Owens, Jr.,  
Howard V.  
LREP ISIS Patent Department Woodcock Washburn LLP  
CLMN Number of Claims: 62  
ECL Exemplary Claim: 64  
DRWN 7 Drawing Figure(s); 7 Drawing Page(s)  
LN.CNT 3085

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Novel chiral compounds that mimic and/or modulate the activity of  
wild-type nucleic acids are disclosed. In general, the compounds are  
phosphorothioate oligonucleotides wherein the 5', and the 3'-terminal  
internucleoside linkages are chirally Sp and internal internucleoside  
linkages are chirally Rp.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 4 OF 15 USPATFULL on STN  
AN 2006:175301 USPATFULL  
TI Nucleic acid derivatives  
IN Segev, David, Mazkeret Batia, ISRAEL  
PA Bio-Rad Laboratories Inc., Hercules, CA, UNITED STATES (U.S. corporation)  
PI US 20060148751 A1 20060706  
US 7348148 B2 20080325  
AI US 2006-365928 A1 20060302 (11)  
RLI Division of Ser. No. US 2002-57928, filed on 29 Jan 2002, GRANTED, Pat. No. US 7034131  
PRAI US 2001-264308P 20010129 (60)  
DT Utility  
FS APPLICATION  
LREP Martin D. Moynihan, PRTSI, Inc., P.O. Box 16446, Arlington, VA, 22215, US  
CLMN Number of Claims: 25  
ECL Exemplary Claim: 1  
DRWN 33 Drawing Page(s)  
LN.CNT 2511

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A compound which comprises a backbone having a plurality of chiral carbon atoms, the backbone bearing a plurality of ligands each being individually bound to a chiral carbon atom of the plurality of chiral carbon atoms, the ligands including one or more pair(s) of adjacent ligands each containing a moiety selected from the group consisting of a naturally occurring nucleobase and a nucleobase binding group, wherein moieties of the one or more pair(s) are directly linked to one another via a linker chain; building blocks for synthesizing the compound; and uses of the compound, particularly in antisense therapy.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 5 OF 15 USPATFULL on STN  
AN 2005:75135 USPATFULL  
TI Nucleic acid amplification and detection  
IN Huang, Tai-Nang, Lexington, MA, UNITED STATES  
Law, Simon W., Lexington, MA, UNITED STATES  
Liao, Haisun, Sharon, MA, UNITED STATES  
PA Linden Technologies, Inc. (U.S. corporation)  
PI US 20050064432 A1 20050324  
AI US 2003-664608 A1 20030919 (10)  
DT Utility  
FS APPLICATION  
LREP FISH & RICHARDSON PC, 225 FRANKLIN ST, BOSTON, MA, 02110  
CLMN Number of Claims: 44  
ECL Exemplary Claim: 1  
DRWN 2 Drawing Page(s)  
LN.CNT 2854

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Disclosed is a substrate that includes a promoter primer that can be extended to form a transcribable template nucleic acid; and a capture probe. Typically, the promoter primer and the capture probe are non-complementary, and the capture probe can specifically bind to a target nucleic acid. The substrate can be used to amplify and detect one or more target nucleic acids.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 6 OF 15 USPATFULL on STN  
AN 2004:292957 USPATFULL

TI Novel phosphorylation reagents for improved processes to convert  
terminal hydroxyl groups of oligonucleotides into phosphate monoesters  
IN Vagle, Kurt, Longmont, CO, UNITED STATES  
Leuck, Michael, Hamburg, GERMANY, FEDERAL REPUBLIC OF  
Wolter, Andreas, Hamburg, GERMANY, FEDERAL REPUBLIC OF  
PA Proligo, LLC, Boulder, CO, UNITED STATES (U.S. corporation)  
PI US 20040230047 A1 20041118  
US 7276598 B2 20071002  
AI US 2004-821631 A1 20040409 (10)  
PRAI US 2003-461730P 20030409 (60)  
DT Utility  
FS APPLICATION  
LREP SWANSON & BRATSCHUN L.L.C., 1745 SHEA CENTER DRIVE, SUITE 330, HIGHLANDS  
RANCH, CO, 80129  
CLMN Number of Claims: 11  
ECL Exemplary Claim: 1  
DRWN 2 Drawing Page(s)  
LN.CNT 1287

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention discloses novel phosphoramidite reagents for use  
in oligonucleotide synthesis. The present invention further discloses  
novel methods for the conversion of terminal hydroxyl groups of  
oligonucleotides into phosphate monoesters. By employing novel reagents,  
as also disclosed herein, the methods are fully compatible with standard  
procedures for solid phase oligonucleotide synthesis and do not require  
additional processing steps. The inventive reagents to phosphorylate  
terminal hydroxyl groups of oligonucleotides are superior to the prior  
art in that they for the first time combine the desired attributes of  
being a solid compound for facile handling, comprising two  
β-eliminating protective groups removable as fast or faster than  
the standard cyanoethyl group, providing a DMT-group for easy monitoring  
of the coupling efficiency, and enabling a fast final deprotection of  
the phosphorylated oligonucleotide without any extra manipulation steps.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 7 OF 15 USPATFULL on STN  
AN 2004:209359 USPATFULL  
TI Nucleic acid amplification  
IN Liao, Haisun, Sharon, MA, UNITED STATES  
Deik, Amy Anderson, Wakefield, MA, UNITED STATES  
Mamaeva, Natalia, West Roxbury, MA, UNITED STATES  
Woodward, Caroline Ngaara, Boston, MA, UNITED STATES  
Chen, Shin-Yih, Wellesley, MA, UNITED STATES  
Huang, Yih, Lexington, MA, UNITED STATES  
Shen, Ming, Guilford, CT, UNITED STATES  
Law, Simon W., Lexington, MA, UNITED STATES  
Huang, Tai-Nang, Lexington, MA, UNITED STATES  
PA Linden Technologies, Inc., a Delaware corporation (U.S. corporation)  
PI US 20040161792 A1 20040819  
AI US 2004-814876 A1 20040331 (10)  
RLI Continuation of Ser. No. US 2003-341199, filed on 10 Jan 2003, PENDING  
DT Utility  
FS APPLICATION  
LREP FISH & RICHARDSON PC, 225 FRANKLIN ST, BOSTON, MA, 02110  
CLMN Number of Claims: 32  
ECL Exemplary Claim: 1  
DRWN 14 Drawing Page(s)  
LN.CNT 2668

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Disclosed is a method of producing replicates of sample nucleic acids.

The method can include providing an insoluble support comprising attached oligonucleotides, annealing sample nucleic acids to the attached oligonucleotides; constructing template nucleic acids by extending the attached oligonucleotides using a polymerase; and transcribing the template nucleic acids to produce RNA replicates of the sample nucleic acids. The attached oligonucleotides comprise a promoter sequence and a target annealing sequence, and (2) the proximal end of the promoter sequence is spaced from the insoluble support by a predetermined distance.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 8 OF 15 USPATFULL on SIN  
 AN 2004:178273 USPATFULL  
 TI NUCLEIC ACID AMPLIFICATION  
 IN Liao, Haisun, Sharon, MA, UNITED STATES  
 Deik, Amy Anderson, Wakefield, MA, UNITED STATES  
 Mamaeva, Natalia, West Roxbury, MA, UNITED STATES  
 Woodward, Caroline Ngaara, Boston, MA, UNITED STATES  
 Chen, Shin-Yih, Wellesley, MA, UNITED STATES  
 Huang, Yih, Lexington, MA, UNITED STATES  
 Shen, Ming, Guilford, CT, UNITED STATES  
 Law, Simon W., Lexington, MA, UNITED STATES  
 Huang, Tai-Nang, Lexington, MA, UNITED STATES  
 PA LINDEN TECHNOLOGIES, INC. (U.S. corporation)  
 PI US 20040137439 A1 20040715  
 US 6852494 B2 20050208  
 AI US 2003-341199 A1 20030110 (10)  
 DT Utility  
 FS APPLICATION  
 LREP FISH & RICHARDSON PC, 225 FRANKLIN ST, BOSTON, MA, 02110  
 CLMN Number of Claims: 40  
 ECL Exemplary Claim: 1  
 DRWN 14 Drawing Page(s)  
 LN.CNT 2695

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Disclosed is a method of producing replicates of sample nucleic acids. The method can include providing an insoluble support comprising attached oligonucleotides, annealing sample nucleic acids to the attached oligonucleotides; constructing template nucleic acids by extending the attached oligonucleotides using a polymerase; and transcribing the template nucleic acids to produce RNA replicates of the sample nucleic acids. The attached oligonucleotides comprise a promoter sequence and a target annealing sequence, and (2) the proximal end of the promoter sequence is spaced from the insoluble support by a predetermined distance.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 9 OF 15 USPATFULL on SIN  
 AN 2003:271466 USPATFULL  
 TI Nucleic acid derivatives  
 IN Segev, David, Mazkeret Batya, ISRAEL  
 PA Bio-Rad Laboratories Inc. (non-U.S. corporation)  
 PI US 20030191074 A1 20031009  
 US 7034131 B2 20060425  
 AI US 2002-57928 A1 20020129 (10)  
 PRAI US 2001-264308P 20010129 (60)  
 DT Utility  
 FS APPLICATION  
 LREP G.E. EHRLICH (1995) LTD., c/o ANTHONY CASTORINA, SUITE 207, 2001

JEFFERSON DAVIS HIGHWAY, ARLINGTON, VA, 22202  
CLMN Number of Claims: 102  
ECL Exemplary Claim: 1  
DRWN 33 Drawing Page(s)  
LN.CNT 2941

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A compound which comprises a backbone having a plurality of chiral carbon atoms, the backbone bearing a plurality of ligands each being individually bound to a chiral carbon atom of the plurality of chiral carbon atoms, the ligands including one or more pair(s) of adjacent ligands each containing a moiety selected from the group consisting of a naturally occurring nucleobase and a nucleobase binding group, wherein moieties of the one or more pair(s) are directly linked to one another via a linker chain; building blocks for synthesizing the compound; and rises of the compound, particularly in antisense therapy.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 10 OF 15 USPATFULL on STN  
AN 2003:146192 USPATFULL  
TI Nucleic acid amplification  
IN Law, Simon W., Lexington, MA, UNITED STATES  
PI US 20030099937 A1 20030529  
AI US 2002-219616 A1 20020815 (10)  
PRAI US 2001-312443P 20010815 (60)  
US 2001-338523P 20011105 (60)  
US 2002-373364P 20020416 (60)  
DT Utility  
FS APPLICATION  
LREP FISH & RICHARDSON PC, 225 FRANKLIN ST, BOSTON, MA, 02110  
CLMN Number of Claims: 59  
ECL Exemplary Claim: 1  
DRWN 11 Drawing Page(s)  
LN.CNT 2135

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Disclosed is a method of amplifying nucleic acids by appending a promoter sequence on an oligonucleotide and transcribing the nucleic acid. The oligonucleotide can be attached to a solid phase, e.g., a chip. In one example, nucleic acids are amplified by a method that includes: providing a first solid support having 5' attached oligonucleotide; annealing a complex sample that comprises sample nucleic acids to the solid support; and producing template nucleic acids immobilized on the solid support that each include at least a segment of the sample nucleic acids, such that the immobilized templates represent the composition of the sample nucleic acids.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 11 OF 15 USPATFULL on STN  
AN 2003:51109 USPATFULL  
TI Linker phosphoramidites for oligonucleotide synthesis  
IN Pon, Richard T., Calgary, CANADA  
Yu, Shuyan, Calgary, CANADA  
PA University Technologies International Inc. (non-U.S. corporation)  
PI US 20030036066 A1 20030220  
AI US 2001-948918 A1 20010910 (9)  
PRAI US 2000-231301P 20000908 (60)  
DT Utility  
FS APPLICATION  
LREP PATENT ADMINISTRATOR, KATTEN MUCHIN ZAVIS ROSENMAN, 525 WEST MONROE STREET, SUITE 1600, CHICAGO, IL, 60661-3693

CLMN Number of Claims: 72  
ECL Exemplary Claim: 1  
DRWN 7 Drawing Page(s)  
LN.CNT 1978

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A novel approach for combining the ease of cleavage of carboxylic acid linker arms with the single phosphoramidite coupling chemistry of the universal supports useful in oligonucleotide synthesis. There is disclosed a new class of phosphoramidite reagents, linker phosphoramidites, which contain a bifunctional linker arm with a protected nucleoside linked through a 3'-ester bond on one end and a reactive phosphoramidite group or other phosphate precursor group on the other end--see FIGS. 2 and 3. The phosphoramidite group on the linker phosphoramidite may be activated under the same conditions and has similar reactivity as conventional nucleoside-3'-phosphoramidite reagents lacking the intermediate linker arm. The 3'-ester linkage contained within the linker phosphoramidite has similar properties to the linkages on prederivatized supports. The ester linkage is stable to all subsequent synthesis steps, but upon treatment with a cleavage reagent, such as ammonium hydroxide, the ester linkage is hydrolyzed. This releases the oligonucleotide product with the desired 3'-hydroxyl terminus and leaves the phosphate portion of the reagent attached to the support, which is subsequently discarded.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 12 OF 15 USPATFULL on STN  
AN 2002:217248 USPATFULL  
TI Oligonucleotides having site specific chiral phosphorothioate internucleoside linkages  
IN Cook, Phillip Dan, Fallbrook, CA, United States  
Manoharan, Muthiah, Carlsbad, CA, United States  
PA ISIS Pharmaceuticals, Inc., Carlsbad, CA, United States (U.S. corporation)  
PI US 6440943 B1 20020827  
AI US 1999-352058 19990714 (9)  
RLI Continuation-in-part of Ser. No. US 1998-115027, filed on 14 Jul 1998, now patented, Pat. No. US 6242589  
DT Utility  
FS GRANTED  
EXNAM Primary Examiner: Wilson, James O.  
LREP Woodcock Washburn LLP  
CLMN Number of Claims: 63  
ECL Exemplary Claim: 1,17  
DRWN 7 Drawing Figure(s); 7 Drawing Page(s)  
LN.CNT 3127

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Novel chiral compounds that mimic and/or modulate the activity of wild-type nucleic acids are disclosed. In general, the compounds are phosphorothioate oligonucleotides wherein the 5', and the 3'-terminal internucleoside linkages are chirally Sp and internal internucleoside linkages are chirally Rp.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 13 OF 15 USPATFULL on STN  
AN 2001:173730 USPATFULL  
TI Large scale synthesis of oligonucleotides and their associated analogs  
IN Froehler, Brian Carl, Belmont, CA, United States  
Kent, Kenneth Michael, Mt View, CA, United States  
Wu, Sylvia, Castro Valley, CA, United States

PA ISIS Pharmaceuticals, Inc., Carlsbad, CA, United States (U.S. corporation)  
PI US 6300486 B1 20011009  
AI US 1998-196567 19981120 (9)  
RLI Continuation of Ser. No. US 1993-67261, filed on 25 May 1993, now abandoned Continuation of Ser. No. US 1989-366849, filed on 15 Jun 1989, now patented, Pat. No. US 5164491, issued on 17 Nov 1992 Continuation of Ser. No. US 1991-654707, filed on 13 Feb 1991  
DT Utility  
FS GRANTED  
EXNAM Primary Examiner: Geist, Gary; Assistant Examiner: Crane, L E  
LREP Woodcock Washburn Kurtz Mackiewicz & Norris LLP  
CLMN Number of Claims: 3  
ECL Exemplary Claim: 1  
DRWN 2 Drawing Figure(s); 2 Drawing Page(s)  
LN.CNT 1228

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention describes methods for the production of oligonucleotides under conditions which exploit the desirable characteristics, such as the property of sustaining high degrees of substitution, of functionalized organic polymeric supports while avoiding the sluggish kinetics and low rates of conversion which normally plague syntheses involving such solid supports. By employing the methods and materials disclosed, functionalized support, substituted to a degree of about 250  $\mu\text{mol/g}$ , can be utilized at greater than 98% conversion levels for each sequential nucleotide coupling cycle, to provide unprecedented amounts of isolated oligonucleotide per gram of solid support.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 14 OF 15 USPATFULL ON STN  
AN 93:31521 USPATFULL  
TI Monomethoxytrityl protected oligonucleotides bound to a solid support  
IN Froehler, Brian C., 2310 Monserat Ave., Belmont, CA, United States 94002  
Kent, Kenneth M., 1725 Wright Ave. 63, Mt. View, CA, United States 94043  
Wu, Sylvia, 6050 Mount Rushmore Cir., Castro Valley, CA, United States 94552

PI US 5204455 19930420  
AI US 1992-833242 19920210 (7)  
RLI Continuation of Ser. No. US 1989-366849, filed on 15 Jun 1989, now patented, Pat. No. US 5164491  
DT Utility  
FS Granted  
EXNAM Primary Examiner: Rollins, John W.  
CLMN Number of Claims: 10  
ECL Exemplary Claim: 1  
DRWN 2 Drawing Figure(s); 2 Drawing Page(s)  
LN.CNT 1045

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention describes methods for the production of oligonucleotides under conditions which exploit the desirable characteristics, such as the property of sustaining high degrees of substitution, of functionalized organic polymeric supports while avoiding the sluggish kinetics and low rates of conversion which normally plague syntheses involving such solid supports. By employing the methods and materials disclosed, functionalized support, substituted to a degree of about 250  $\mu\text{mol/g}$ , can be utilized at greater than 98% conversion levels for each sequential nucleotide coupling cycle, to

provide unprecedented amounts of isolated oligonucleotide per gram of solid support.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L8 ANSWER 15 OF 15 USPATFULL ON STN  
AN 92:95181 USPATFULL  
TI Large scale synthesis of oligonucleotides and their associated analogs  
IN Froehler, Brian C., Belmont, CA, United States  
Kent, Kenneth M., Mt. View, CA, United States  
Wu, Sylvia, Castro Valley, CA, United States  
PA Gilead Sciences, Foster City, CA, United States (U.S. corporation)  
PI US 5164491 19921117  
AI US 1989-366849 19890615 (7)  
DT Utility  
FS Granted  
EXNAM Primary Examiner: Rollins, John W.  
CLMN Number of Claims: 14  
ECL Exemplary Claim: 1  
DRWN 2 Drawing Figure(s); 2 Drawing Page(s)  
LN.CNT 1052

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention describes methods for the production of oligonucleotides under conditions which exploit the desirable characteristics, such as the property of sustaining high degrees of substitution, of functionalized organic polymeric supports while avoiding the sluggish kinetics and low rates of conversion which normally plague syntheses involving such solid supports. By employing the methods and materials disclosed, functionalized support, substituted to a degree of about 250  $\mu\text{mol/g}$ , can be utilized at greater than 98% conversion levels for each sequential nucleotide coupling cycle, to provide unprecedented amounts of isolated oligonucleotide per gram of solid support.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.